



Saskatchewan
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Farm & Food Report

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Saskatchewan

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CONNECTION WITH PRODUCERS BEHIND NEW FLAX WEBSITE

A completely revamped website for the Saskatchewan Flax Development Commission is just part of efforts to improve services for producers. The commission's executive director, Linda Braun, says they are already receiving positive feedback on the changes.

"The previous version was very time-consuming for farmers to access, so we decided to revamp the site to make it much easier for them," Braun said. "Our website is a great way to get information to farmers relatively quickly."

According to the commission, there are over 15,000 flax producers in Saskatchewan, and the province produces four times more flax than its nearest provincial rival in Canada. The commission invests in research, communication, and market facilitation with the objective of further developing the industry.

"A producer recently told me that Saskatchewan is the heart and soul of flax production in this country," Braun said.

Prominent on the new website is information on the Flax Development Commission's Agri-Environmental Group Plan.

"Complete plant utilization is important," Braun noted. "Flax is a great crop for the bio-economy. We're looking at both the seed and the straw, animal and human markets, and industrial fibre markets."

One of the important developments on which the commission is working with producers is to find markets for the fibre from Saskatchewan flax straw.

"Flax producers have always been good stewards of the land and have taken a leadership role, but sometimes with the amount of fibre there was no alternative but to burn," Braun said. "So we've been talking about chopping and spreading, and sharing information on stripper-header technology. We've also been working on developing the fibre industry from the field through to the consumer."

Braun says the development of new markets for flax fibre is bringing many players to the table.

"We've been working on the national scene with organizations like Flax Canada 2015, the National Bio-Fibres Advisory Board, and the new network of about 100 people within the Agricultural Bioproducts Innovation Program," she noted.

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Early in 2008 the commission will be putting together two important events for flax producers. The first will be Flax Day on January 7, during the Crop Production Week. The program will include "everything from what the breeders are doing to what the market is going to look like," Braun stated.

In addition, the commission is organizing a two-day workshop in February on the topic of effective flax straw management. "We'll be bringing in farmers and researchers to discuss all the alternatives and the development of new beneficial management practices for flax straw," she said.

Braun advised producers to watch the Saskatchewan Flax Development Commission website, at www.saskflax.com, for more details on these events, as well as on the upcoming board election.

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BEEKEEPERS ASSOCIATION CONTINUES TO BUZZ

The Saskatchewan Beekeepers Association (SBA) has been around for 85 years, but this energetic organization does not intend to slow down anytime soon. In fact, it is buzzing with continued progress and the opportunity to further its research.

Recently, the SBA was given a \$366,729 grant under the Advancing Canadian Agriculture and Agri-Food in Saskatchewan (ACAAFS) program to continue its important work for another three years. The grant is targeted at the organization's ongoing project to breed productive, gentle honeybee lines with improved tolerance to mites and brood diseases.

The SBA's continued research will help to establish breeding methods to develop bees with genetic resistance to parasitic mites, eliminating or reducing the need for chemicals. This practice protects the environment from harmful organophosphates, the consumer from food safety or quality concerns, and the beekeeper from bee colony losses.

"This research is essential, due to the fact that two mites, the tracheal mite and the varroa mite, have made their way to Canada, and have become devastating over the last 10 years," said John Gruszka, Provincial Apiculturist for Saskatchewan Agriculture and Food. "These mites have caused the honey production industry in Western Canada to re-think and change how it operates."

Gruszka says that, beginning in the early 1940s, Western Canadian beekeeping developed as what is known as a package bee industry. "We used to be able to purchase two pounds of bees and a new queen from the southern states. They would be trucked up here in April, installed in the colonies, and produce a honey crop. Then the bees would be destroyed and the same process would be repeated the following year," he stated.

"Since the advent of these mites and the concerns over how devastating they are going to be, along with rapid increase in the price of the honey, there has been a movement to learn how to keep bees in our climate. It was re-thinking an old technology and applying new methodology."

The SBA was at the forefront of this movement. When the tracheal mite first gained prominence, the organization applied for and received money from Saskatchewan Agriculture and Food's Agriculture Development Fund to test how much of an impact it would have on the industry.

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When the varroa mite appeared, the industry approached government to change the regulations on importing honeybees into Canada. This resulted in a certification program that permitted only mite-free honeybees to be imported into the country.

"The SBA has been working on breeding a honeybee stock that is suitable to our climate and that minimizes winter losses, which allows the bees to come through the winter in much stronger colonies, enhancing honey production. They are now showing almost complete resistance to the honeybee tracheal mite and some resistance to the varroa mite," Gruszka said.

"The SBA has been instrumental in getting research done in order to tackle the concerns and threats to the honey production industry, and in working towards a long-term solution that will alleviate some of our current dependence on chemical applications to keep these mites under control."

The SBA has more recently established the Saskatchewan Beekeepers Development Commission to administer a producer-based development fund.

The commission collects approximately \$38,000 per year from Saskatchewan beekeepers, which is used for the genetic breeding program, as well as for advertising and promotion on the provincial and national scale.

There are roughly 140 commercial beekeeping producers in Saskatchewan (and another 1,000 hobby beekeepers) who provide around 1,000 summer jobs bringing in the honey crop during the extracting season. On a per-colony basis, Saskatchewan is one of the largest honey producers in the world, with a 10-year average of about 200 pounds per colony.

"Saskatchewan produces between 20 and 25 million pounds of honey per year, most of which is exported to other parts of Canada, the United States and the world," said Gruszka.

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HOW MANY BUSHEL PER BEDROOM?

A Saskatchewan company is now offering the first ever Saskatchewan-built grain burning stove for sale to the public and dealers.

Delmer and Janet Hering operate Prairie Fire Grain Energy Inc. from their farm home near Bruno. They have been involved with grain-burning heating systems since 1993, and Delmer says their experience drove the need for this new product.

"We were selling an Ontario-made stove for 14 years, and decided that we could make some improvements on it," Hering stated. "Also, they couldn't keep up with the demand, so we decided it was time to make them here in Saskatchewan."

The Herings teamed up with Mifab Manufacturing of North Battleford, a company primarily known for making and distributing plumbing hardware, to manufacture the new stove, known as the "Prairie Fire Model PFG-060."

Hering says it's the first stove designed to burn grain.

"Most of the stoves are either converted wood pellet stoves or burn corn," he stated. "This is the first certified grain burner. We can also burn bin-run grain, whereas the other one had to have clean grain."

Prairie Fire used the opportunity of starting from the ground up to add improvements to the design, such as a bigger glass door, better air flow and a heavier burning pot. It was also built so that it could be certified for use in mobile homes.

Prairie Fire rates the new grain-burning stove as being capable of heating approximately 2,000 square feet, burning about one bushel of grain per day. According to Hering, the stove pays for itself in energy cost savings.

"It's about four times cheaper than using natural gas, and seven to eight times cheaper than propane, diesel or electric heat," he said. "If you're heating with propane, diesel or electricity, [the Prairie Fire] will pay for itself in probably two years. Compared with natural gas, it might be three to four years."

The grain-burning stove has an operating life expectancy of about 20 years.

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While the new stove is designed to burn wheat and rye, Hering says it doesn't need to be fed number one grade.

"The trick is to use poor quality grain," he noted. "If you can find something that's been downgraded, like wheat with fusarium, or grain that's partly heated or mouldy, it will all work."

The stove is designed to be a do-it-yourself installation for most users. It can be situated in any open area, and is vented directly through an outside wall, eliminating the need for an additional chimney. Heat output is controlled by a timed release system that feeds the grain into the firebox from a hopper, and circulated by a variable-speed fan.

"They hold a bushel," Hering stated. "You pour it into the hopper, fill it up, light it, and away you go."

Hering says the primary market for their grain-burning stove is the farm, but they are also selling to owners of cottages and acreages, as well as to a few town-dwellers. Prairie Fire Grain Energy also sells two different sizes of grain-burning boiler systems, which operate outside the home or shop, heating water which is then piped into the buildings to provide heat.

Potential buyers or those interested in becoming dealers can contact the Herings via their website at www.grainburningstoves.ca, or give them a call at (306) 369-2825.

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NEW BEGINNINGS FOR AGRICULTURE COUNCIL OF SASKATCHEWAN

Many new beginnings are on the horizon for a well-known agriculture and rural development organization – starting with a new name.

The Agriculture Council of Saskatchewan (ACS) is the new title of the former Saskatchewan Council for Community Development, or SCCD.

“During our comprehensive strategic planning process this past February, the board felt that we have evolved into an organization with more of an agricultural focus, and they thought that a name change was very critical in terms of being looked at as an agricultural organization,” said ACS Executive Director Laurie Dmytryshyn.

“Our new name, therefore, reflects the primary activities of our organization and our membership base.”

The majority of ACS members are provincial agricultural, agri-food and community development organizations.

“Membership is constantly growing. We currently have 39 members, a number that has doubled over the past year,” Dmytryshyn said. In order to become a member, an interested party must be a provincial organization in the agriculture, agri-food or community development sectors.

During its strategic planning process, the board also developed a new vision and mission for the organization, along with some strategies to guide ACS into the future.

“The ACS vision and mission is to provide leadership and programming to advance the agriculture and agri-food sectors, contributing to a healthy Saskatchewan community,” Dmytryshyn stated.

ACS will expand the programming it already delivers to advance Saskatchewan’s agriculture and agri-food industry. Through programs like the federally funded Advancing Canadian Agriculture and Agri-Food Saskatchewan (ACAAFS) program, ACS has been able to fund projects that will advance the industry within Saskatchewan, providing many new and innovative opportunities in both domestic and global markets for the province’s primary and value-added products. The next application deadline for ACAAFS funding requests of more than \$10,000 is November 16, 2007.

The Biofuels Opportunities for Producers Initiative (BOPI) is another federally funded program that has been very successful. Eleven projects from across Saskatchewan have received funding to develop business plans and feasibility studies for ethanol and biodiesel production facilities with significant producer involvement. To date, ACS has committed over \$11.57 million in funding to 170 projects through BOPI and the ACAAFS program.

ACS is also continuing to deliver two well-received initiatives, the Saskatchewan Agri-Food Value Chain Initiative and the Centre for Agribusiness Training and Education (CATE). The Value Chain Initiative will continue with workshops across Saskatchewan this fall, showing producers, processors and marketers how they can forge alliances that will allow them to benefit from each other and to better respond to market demands. The CATE program will continue to provide a link to educational institutions, workshops and courses for those seeking education and training opportunities in the agriculture and agri-business fields. The CATE website can be accessed at www.agtraining.ca.

ACS has also recently elected a new chair, Murray Purcell, who represents the Saskatchewan Association of Rural Municipalities (SARM) at ACS.

"Murray brings his extensive producer expertise to the organization, and we're confident his leadership skills will provide us with the momentum we need to build a strong, proactive and effective industry council in Saskatchewan," Dmytryshyn said.

Purcell takes over from Garth Patterson of the Saskatchewan Pulse Growers, who decided to step down from the chair position. "As chair, Garth's input, leadership and guidance were invaluable during this past transition year. We are pleased that he will be staying on as a director for ACS," Dmytryshyn added.

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PROTECTING CATTLE AGAINST NITRATE POISONING

There are all sorts of potential dangers from which cattle producers need to protect their herds. The hardest to defend against are those threats which can't be seen, like nitrate poisoning.

All plants contain some nitrate, but excessively high amounts are likely to occur in forage grown under stress conditions such as drought, frost, hail, low temperatures, herbicide applications or diseases.

Saskatchewan can experience all of these circumstances over the course of a regular growing season. Therefore, it's important for producers to be aware of the symptoms, preventative measures and treatments for nitrate poisoning in cattle.

The Farm Animal Council of Saskatchewan (FACS) has devoted one of its many "Cattle FACS" fact sheets to the subject to give producers more knowledge in this area.

"The information we provide through these fact sheets has been developed by committees of cattle care experts with specific knowledge in each of the topic areas covered," said FACS Executive Director Adele Buettner. "Our organization offered to co-ordinate the effort, produce the material and make it as widely available to producers as possible."

The fact sheet explains that, when growing conditions are favourable, plants take up nitrogen largely in the form of nitrate. The nitrate is rapidly converted to ammonia, which is incorporated into plant protein. Unfavourable growing conditions can interfere with nitrate use and cause it to accumulate in the plant. If the stress is removed and the plants recover, excess nitrate stored in the plant is usually metabolized over several days.

Under normal conditions, cattle convert the nitrate in the forage they eat to nitrite, which is then converted to ammonia and used by rumen microbes to make protein. Feed experts suggest that problems arise when nitrate converts to nitrite faster than nitrite converts to ammonia. When this occurs, nitrite accumulates and is absorbed into the bloodstream, where it binds with haemoglobin, thus reducing the oxygen-carrying capacity of the blood.

"In worst-case scenarios, animals can die by suffocation," Buettner said.

The amount of nitrate in plant tissue can be affected by other factors, such as the stage of growth. Nitrate concentrations in forage are usually higher in young plants and decrease as the plant matures. However, plants grown in soil with excessive nitrates, or those grown under stress might still have a

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higher content at maturity.

The parts of the plant closest to the ground also have the highest nitrate levels. Leaves contain fewer nitrates than stalks, and the seed (grain) and flower usually contain little or no nitrate.

Similarly, since nitrates in the soil are the source of nitrate in plants, a positive relationship exists between the two. However, the effect of nitrogen fertilization appears to be less significant in causing high nitrate content in forages than most other factors.

“Animal nutritionists say that some common cattle feed like alfalfa, vetch, trefoil, peas and clover generally do not accumulate nitrates,” Buettner said. “However, they recommend that producers feed test their legumes to be sure they are not storing excess nitrates in the plant material.”

According to the fact sheet, producers can still safely use feed that has higher-than-normal nitrate levels, provided they carefully manage their rations. Forage with high nitrate content can be diluted with grain or other forage low in nitrates. Feeding grain in combination with high-nitrate forage can help reduce the effect of the nitrate content because the energy from the grain helps complete the conversion of nitrate into bacterial protein in the rumen.

Frequent consumption of small amounts of high-nitrate feed can likewise increase the total amount of nitrate that can be tolerated by livestock, since it helps cattle to adjust to high-nitrate feeds. “Experts advise to feed long-stemmed forages, such as oats or barley hay, that contain high amounts of nitrate in limited amounts several times daily rather than feeding large amounts once or twice daily,” Buettner said.

Under the right conditions, pastures can also accumulate nitrates. Risk can be reduced by providing supplemental feed that contains little or no nitrate, and grazing suspected pastures for limited periods each day for the first week to help cattle adapt. If possible, producers should not graze a suspected pasture until one week after a killing frost.

Should a producer’s efforts to prevent nitrate poisoning fail, the fact sheet also offers some treatment instructions. “When the condition is first suspected, call a veterinarian immediately to confirm the tentative diagnosis and administer treatment,” Buettner stated. “Handle the affected cattle as little and as quietly as possible to minimize their oxygen needs. Finally, remove the contaminated feed and replace it with a high-energy alternative, such as barley.”

The Cattle FACS fact sheet on nitrate poisoning can be obtained from the organization’s website at www.facs.sk.ca or by calling (306) 249-3227.

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